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(FILE 'HOME' ENTERED AT 12:11:55 ON 30 JUL 2001)

FILE 'CAPLUS, SCISEARCH, USPATFULL' ENTERED AT 12:12:11 ON 30 JUL 2001

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L1         50084 S SUPERLATTICE
L2          2348 S L1 (P) (THIN (2A) FILM)
L3            40 S L2 (P) ARRAY
L4            37 DUP REM L3 (3 DUPLICATES REMOVED)
L5            35 S L2 (P) (SCREEN? OR TEST?)
L6            27 DUP REM L5 (8 DUPLICATES REMOVED)
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=>

L6 ANSWER 1 OF 27 USPATFULL

ACCESSION NUMBER:	2001:47390 USPATFULL
TITLE:	Thin film structure machining and attachment
INVENTOR(S):	Cheung, Patrick C. P., Castro Valley, CA, United States Berlin, Andrew A., San Jose, CA, United States Biegelsen, David K., Portola Valley, CA, United States Lau, Rachel King-Ha, Fremont, CA, United States Yim, Mark H., Palo Alto, CA, United States
PATENT ASSIGNEE(S):	Xerox Corporation, Stamford, CT, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6210514	B1	20010403	
APPLICATION INFO.:	US 1998-22173		19980211	(9)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Mayes, Curtis
LEGAL REPRESENTATIVE:	Oliff & Berridge, PLC
NUMBER OF CLAIMS:	12
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	27 Drawing Figure(s); 14 Drawing Page(s)
LINE COUNT:	733

DETD . . . polymeric membrane 24, by deposition of large numbers of particles or liquid through

traditional thick film technologies such as silk **screening**, spin coatings, or painting, by

contact transfer of film from a separate liquid or solid support to the **thin film**

support 25, or by any other conventional deposition or transfer technique. As will be appreciated,

films do not have to be homogeneous materials, but can be heterogeneously patterned, have structured

compositions or be formed to have **superlattices**. Multilayer or structured layers are also

contemplated to be within the scope of the present invention. Generally, films are on. . .

L4 ANSWER 33 OF 37 USPATFULL
ACCESSION NUMBER: 87:61834 USPATFULL
TITLE: Micro-porous superlattice separations
INVENTOR(S): Roxlo, Charles B., Bridgewater, NJ, United States
Deckman, Harry W., Clinton, NJ, United States
PATENT ASSIGNEE(S): Exxon Research and Engineering Company, Florham Park, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4690750		19870901
APPLICATION INFO.:	US 1986-874027		19860613 (6)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Metz, Andrew H.
ASSISTANT EXAMINER: Caldarola, Glenn
LEGAL REPRESENTATIVE: Hantman, Ronald D.
NUMBER OF CLAIMS: 10
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 14 Drawing Figure(s); 8 Drawing Page(s)
LINE COUNT: 708
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
DETD **Superlattices** consisting of **thin film** layers 5-2500 .ANG. thick, provide
a unique template for forming two dimensional pores with precisely controlled surface chemistry. By
breaking the **thin film** up in a manner that exposes edges of the **thin film** layers it is possible to create a slotted structure by selectively etching away one or
more of the materials comprising the **superlattices**. FIG. 1 shows a schematic diagram of a
fabrication sequence used to create controlled dimension pores in **superlattice** zeolite-like
materials. In the sequence shown in FIG. 1 alternating **thin film** layers 1,3 are
sequentially deposited onto a substrate 5. The lithographic template formed by the alternating layers
1,3 is exposed. . . exposed at the post edge is selectively etched, slots 13 are formed in the post
and the material containing the **array** of etched slots is referred to as a micro-porous
superlattice material 15. The width and uniformity of the resulting slot is determined by the
thickness and uniformity of the deposited film. Since **superlattices** can be grown with layers
that are flat and smooth to better than 5 .ANG., (P. N. Petroff, A. C.. . . larger molecular
species. Chemistry of the slots can be directly controlled by the choice of materials used to form the
superlattice.

L4 ANSWER 32 OF 37 USPATFULL
ACCESSION NUMBER: 87:73226 USPATFULL
TITLE: Micro-porous superlattice material having zeolite-like properties
INVENTOR(S): Deckman, Harry W., Clinton, NJ, United States
Stephens, Richard B., Annandale, NJ, United States
Tiedje, J. Thomas, Lebanon, NJ, United States
Abeles, Benjamin, Annandale, NJ, United States
PATENT ASSIGNEE(S): Exxon Research and Engineering Company, Florham Park, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 4701366		19871020	
APPLICATION INFO.:	US 1985-750140		19850701	(6)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Lesmes, George F.
ASSISTANT EXAMINER: Rucker, Susan S.
LEGAL REPRESENTATIVE: Hantman, Ronald D.
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 10 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT: 605
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
DRWD **Superlattices** consisting of **thin film** layers 5-2500 .ANG. thick, provide
a unique template for forming two dimensional pores with precisely controlled surface chemistry. By
breaking the **thin film** up in a manner that exposes edges of the **thin film** layers it is possible to create a slotted structure by selectively etching away one or
more of the materials comprising the **superlattices**. FIGS. 1a-1c show a schematic diagram of
a fabrication sequence used to create controlled dimension pores in **superlattice**
zeolite-like materials. In the sequence shown in FIGS. 1d-1c alternating **thin film**
layers 1,3 are sequentially deposited onto a substrate 5. The lithographic template formed by the
alternating layers 1,3 is exposed. . . post edge is selectively etched, slots 14 are formed in the
post between layers 11 and the material containing the **array** of etched slots is referred to
as a micro-porous **superlattice** material 15. The width and uniformity of the resulting slot
is determined by the thickness and uniformity of the deposited film. Since **superlattices** can
be grown with layers that are flat and smooth to better than 5 .ANG., (P. N. Petroff, A. C.. . .
larger molecular species. Chemistry of the slots can be directly controlled by the choice of materials
used to form the **superlattice**.

ACCESSION NUMBER: 1998:108645 USPATFULL
TITLE: Bismuth layered structure pyroelectric detectors
INVENTOR(S): Ramer, O. Glenn, Los Angeles, CA, United States
Robinson, David A., Oceanside, CA, United States
Drab, John J., Encinitas, CA, United States
PATENT ASSIGNEE(S): Raytheon Company, Lexington, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5804823		19980908	
APPLICATION INFO.:	US 1995-540533		19951010	(8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Glick, Edward J.
LEGAL REPRESENTATIVE: Schubert, W. C., Lenzen, Jr., G. H.
NUMBER OF CLAIMS: 13
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 7 Drawing Figure(s); 5 Drawing Page(s)
LINE COUNT: 440

SUMM . . . and other problems are overcome and the objects of the invention are realized by a
pyroelectric detector comprised of a **thin film** of bismuth layered material. The
inventors have discovered that this class of ferroelectric material, which was previously unknown for
use. . . . changes in the dielectric constant or dielectric loss of a material with temperature,
enables the fabrication of thermal detectors and **arrays** of thermal detectors that overcome
the problems inherent in many conventional pyroelectric materials. The bismuth layered materials have
a naturally occurring "**superlattice**" which enables the properties of the material to be
varied by a change in the bismuth concentration in the starting. . . . be tailored over a broad range
because the ceramic compositions have high solid solubility within each other. These bismuth layered
superlattice materials are shown to be suitable for the fabrication of "room temperature"
infrared detectors or detector **arrays**.

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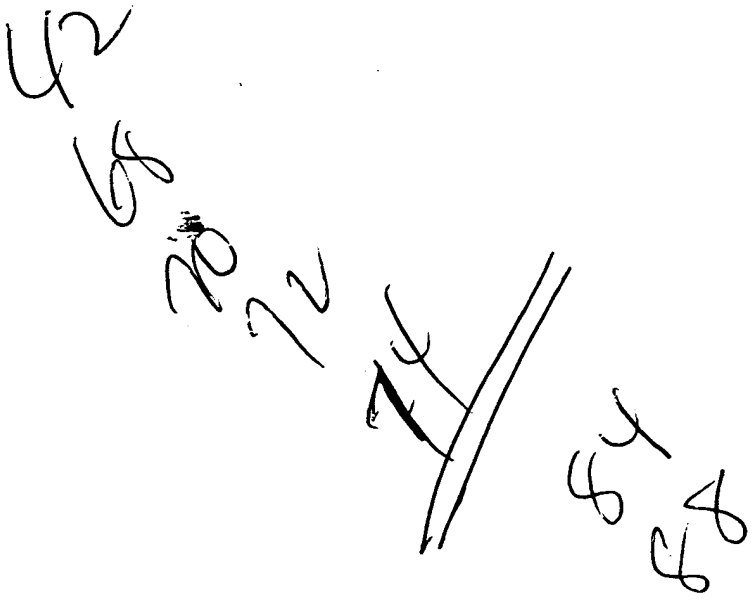

51-56 density

60 ceramic

64 deliv as solid

65 sequentially

66 [illegible]

67 layers different

(68) array

69 ID

(70) 5 layers

71 screening (drop)

(72) 100 or more regions

(74) ID

75 } barriers

76 }

77 barrier types

78 [illegible]

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New matter

92-95

80 "consist ess. of"

8 } 1,2nd differ

10 diff amts 1st

11 diff amts 2nd

15-23 #s empds

24 deliv tech.

26 useful prop

30-35 # components of 1st mat.

(42)

43 screens

45 layers

46 } interact

47 }